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Could Translating Whale Songs Help Us Find Aliens?

Researchers are working to decode whale songs, which may help us decode alien messages.

By Avery Hurt | Nov 8, 2023 11:00 AM



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If you've ever listened to a recording of whale song, you know that it can be haunting, beautiful, and moving. The **songs** of humpbacks and the **clicks**, called codas, of sperm whales are sophisticated forms of communication, according to **research**.

But what are they actually saying to each other? We humans don't know, but some scientists are trying to find out. And when they do, they hope that being able to communicate with whales could not only help save life on this planet but also allow us to communicate with life from other planets as well.

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Project CETI, which stands for Cetacean Translation Initiative, is a multidisciplinary effort made up of marine biologists, linguists, experts in natural language processing, AI experts, roboticists, and, yes, cryptographers. Founded by David Gruber in 2017, CETI is

using the latest advances in artificial intelligence to try to crack the code of sperm whale communication.

Whales are particularly interesting to researchers looking into nonhuman communication because whale culture and intellect are more similar to ours than to that of other animals, Gruber **told** *Discover* last year. Meanwhile, the **Earth Species Project** is attempting to decode the language of beluga whales as well as other species.

(Credit: Vicki_Smith/Shutterstock)

Why Is Whale

Communication Important?

Beyond the fact that it would be incredibly cool to be able to understand — and maybe even speak with — whales, why are scientists putting so much time and effort into interspecies communication? To some, understanding whale communication could improve conservation efforts.

Biologist and environmentalist Roger Payne, whose 1970 **album**, “Songs of the Humpback Whale,” inspired a worldwide movement to ban commercial whaling, was principal advisor to Project CETI. Shortly before he died this June, Payne wrote an **article** for *Time* in which he argued that the most important scientific discovery of the past 100 years is that all species on Earth are dependent on one another.

Yet because of our ignorance of other species, we’re not only harming them but

harming ourselves. But what if we could communicate with them? That might, Payne wrote, be even more powerful than discovering whale songs:

Just imagine what would be possible if we understood what animals are saying to each other; what occupies their thoughts; what they love, fear, desire, avoid, hate, are intrigued by, and treasure. If we could communicate with animals, ask them questions and receive answers—no matter how simple those questions and answers might turn out to be—the world might soon be moved enough to at least start the process of halting our runaway destruction of life.

However, decoding what Payne called “WhaleSpeak” might do more than save Earth. It might help us communicate with beings from other planets.

Read More: [Understanding How Whales Communicate](#)

How Can Whales Help Us Recognize Alien Life?

One of the often-overlooked questions when we think about making contact with aliens is,

“How will we communicate with extraterrestrials if we encounter them?” This is not merely a problem of how we’ll chat after we’ve made contact. It’s a crucial factor in the search for extraterrestrial intelligence. If an alien civilization were sending us a great big message — “Hello from outer space!” — how would we know? Could we be missing alien messages because we don’t recognize them as language?

This problem bothered Laurence Doyle, a research scientist at the SETI (Search for Extraterrestrial Intelligence) Institute, an organization focused on searching for intelligent life beyond Earth. Doyle was working on ways to determine if a given message is intelligent when he began thinking about whales.

Whale society is very complex, and whales are extremely intelligent. They communicate not by facial expressions and gestures but by sending signals through the ocean

(analogous to how aliens might send messages across space). Doyle realized that studying whale communication could teach us a lot about what an alien message might look like.

Doyle teamed up with a group of scientists researching whale communications and brought information theory to the mix in order to get a better idea of the complexity of whale songs, searching for rules and patterns. Applying information theory to whale song won't, of course, translate what whales are saying.

But it could help us understand other different types of intelligence and different ways of communicating. And that could be invaluable preparation for communicating peacefully with intelligent beings elsewhere in the galaxy should we ever encounter them.

Read More: [How Many Whales Are Left In the World?](#)

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